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March 1964

PHOTOGRAPHIC INTERPRETATION REPORT

ANTIMISSILE TEST CENTER, SARY-SHAGAN, USSR CHANGES AND ADDITIONS

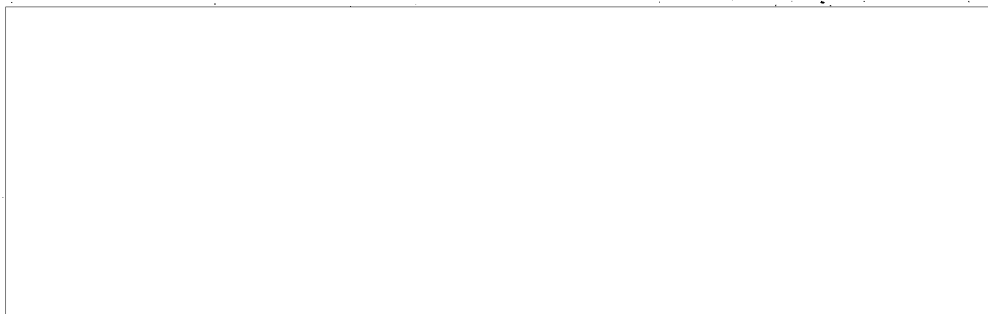
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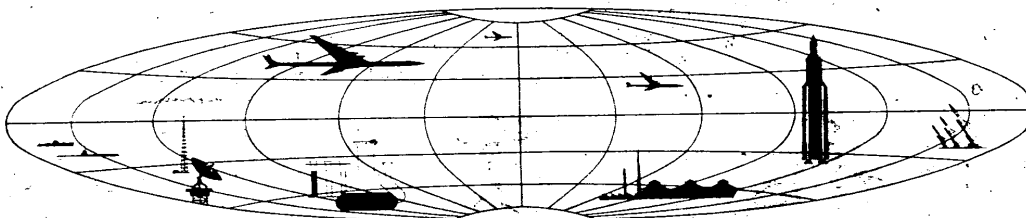


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PHOTOGRAPHIC INTERPRETATION REPORT

ANTIMISSILE TEST CENTER,
SARY-SHAGAN, USSR
CHANGES AND ADDITIONS

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NPIC/R-162/64

March 1964

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PREFACE

This report is in partial response to requirements AF-4-63 and OSI/R-135/63. It provides information on the majority of facilities at the Antimissile Test Center, [REDACTED] Sary-Shagan, USSR, (Figure 1), supplementing previous reports. 1-6. It is based on KEYHOLE photography from [REDACTED]. Included are descriptions of the facilities comprising the Support Base, Launch Complex A, Launch Complex B, those sites containing the recently constructed triad of buildings, and a SAM training center approximately 41 nautical miles (nm) south-southwest of Sary-Shagan. A detailed report [REDACTED] was published in July 1963 on the HEN ROOST antennas.

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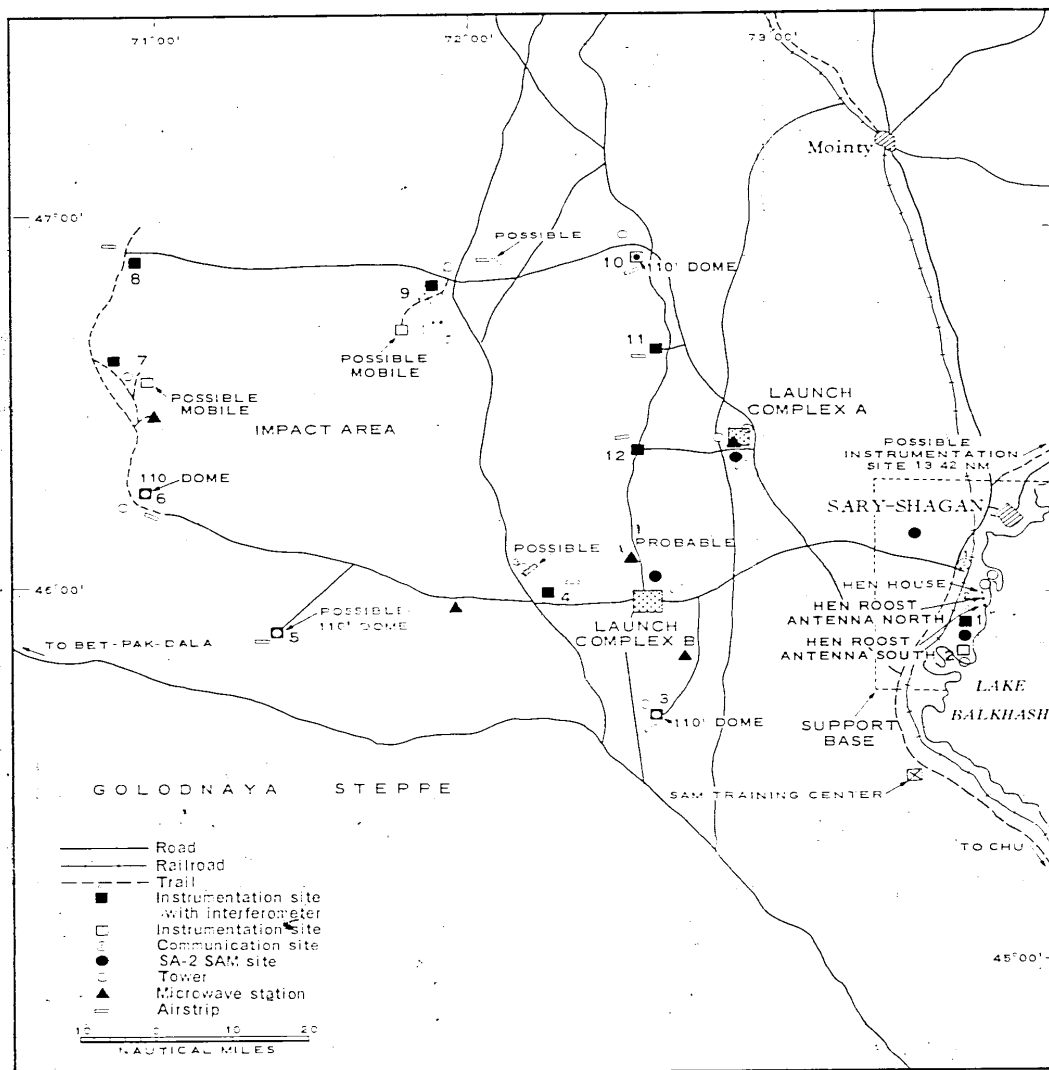


FIGURE 1. ANTIMISSILE TEST CENTER, SARY-SHAGAN, USSR.

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SUMMARY

25X1 Photography from [] KEYHOLE missions
25X1 from [] was compared with previous photography in order to update existing reports on the Sary-Shagan Antimissile Test Center (SSATC). This photography covers the entire Center and represents generally the best KEYHOLE coverage received to date. Stereoscopic coverage is provided on almost all of the facilities. No new operational antimissile-missile launch complexes have been identified. Almost all the facilities comprising the Support Base have undergone change or expansion in varying degree from []

25X1 At Launch Complex A minor building construction has occurred in the headquarters and administration area from []

25X1 Activity and movement of equipment were noted in the six launch sites and associated electronic facilities. The only significant expansion of facilities at these sites during this period occurred at Electronic Site C, associated with Launch Sites 5 and 6. An approximately 300-foot-long extension to the modified L-shaped

building was completed in the large central facility at this site.

At Launch Complex B little or no change was discernible in the support and launch areas during this period. Construction continued, however, in the triad of buildings just southwest of Facility B. Current emphasis has been primarily on the site exterior and on the roof of the large rectangular building, where a circular dish-like or disc-like object was observed in [] Triad activity has progressed concurrently at Instrumentation Sites 2 and 10 and Possible Instrumentation Site 13. []

Another area of interest has been under development at Possible Instrumentation Site 13 since [] close to the building triad and consisting to date of a linear excavation (approximately 2,200 feet long) with a large unidentified possible structure in the center.

SUPPORT BASE

The Support Base (Figure 2) has been covered by generally very good KEYHOLE photography. Relatively significant development has taken place in the following areas: Main Housing Complex, Dirt Strip, Instrumentation Site 1, Instrumentation Site 2, and Communications Site 1. Minor changes have been noted in the majority of the other facilities. Almost continuous development has been observed in the warehouse and housing areas and at the Probable Range Headquarters Complex Control Area situated in the Main Housing Complex. A tower approximately 700 feet high was erected

in the Main Housing Complex close to Lake Balkhash. From [] the 16,500-foot-long dirt strip was widened from 270 feet to 1,500 feet. The SAM Training Center, which is described under the Support Base, was identified on photography of [] and has been active since that time when photographed. One additional SAM launch site and one probable SAM launch site have been added to the original three sites since [] as well as a small number of buildings. Construction continues at Instrumentation Site 1, where a tracking station now has been identified.

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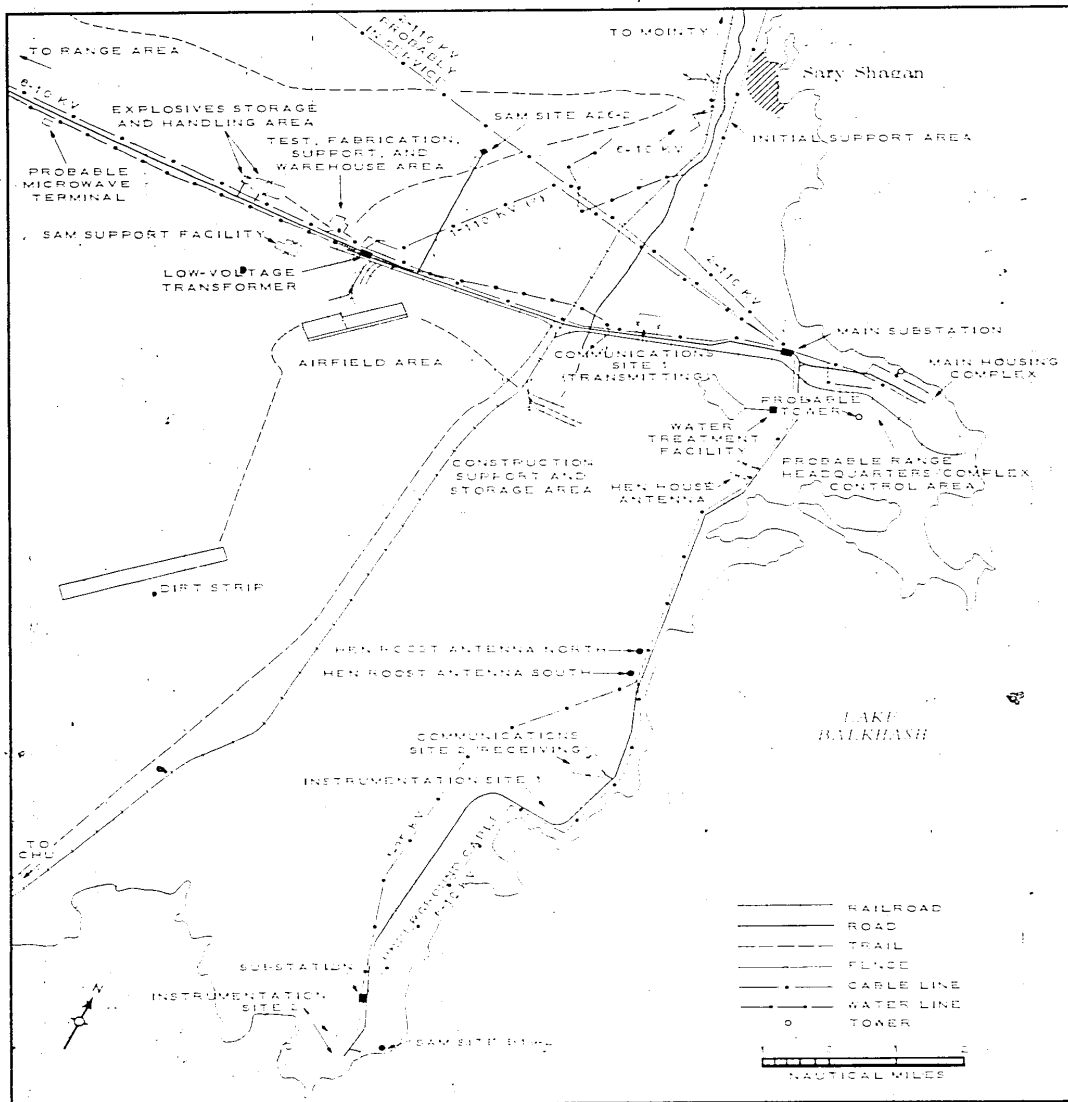


FIGURE 2. SUPPORT BASE.

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MAIN HOUSING COMPLEX

Housing and Storage Facilities (Figure 3).

The Original Housing Area underwent no significant change from []

Along the eastern boundary of the New Housing Area 16 new dwellings units (the 5 largest approximately 210 by 60 feet) have been added, some of which were under construction in []. Continuing construction at this area has been observed from that time until []. Foundations for 6 additional buildings (5 large and one small) were noted on photography of []. In the area midway between the Original and New Housing Areas one new building was observed under construction in [].

In the Warehouse Area just south of the Original Housing Area from [] ten small probable warehouses were constructed, two of which were under construction in [] a total of 18 such buildings (each approximately 80 by 30 feet) appeared at the site. Two warehouses were erected along the rail line in the Warehouse Area from [].

Close to the shores of Lake Balkhash and just off the northwest corner of the New Housing Area a tower (approximately 700 feet high) was observed on photography of []. It is situated in an enclosed area (approximately 480 by 430 feet) which also contains a building 135 by 90 feet, five very small structures, and a probable gatehouse.

The rail-served storage area just south-east of the New Housing Area can now be identified as a Probable POL Storage Area. One new support building (95 by 55 feet) appeared along the rail spur between [].

Two groups of six tanks each are observed in the area east of the rail line.

Probable Range Headquarters/Complex Control Area (Figures 3 and 4). This area,

southwest of the New Housing Area, has undergone expansion since [] and changes continue on the latest coverage of [].

Foundation for a new building (390 by 65 feet) was observed in [] in the northeast corner of the site. The exterior appeared complete or nearly complete by []. Additional work has been accomplished on a recently constructed building in the northwest corner so that it now appears to be composed externally of a single unit rather than the two units apparent in []. Construction activity was visible on the roofs of both buildings from []. Good-quality photography of [] reveals a probable tower adjacent to the base of the administration building and a second smaller storage tank, approximately 25 feet in diameter, adjacent to the 35-foot tank.

By [] a building 180 by 55 feet was observed under construction in the southwest corner of the site, and at the same time an unidentified structure (255 by 110 feet) was being erected outside the fenced site and just southwest of this new building. A roughly parallel system of ground conduits, which appeared between [] extends from the building to the Probable Range Headquarters/Complex Control Area.

Plus Configurations (Figure 3). In [] two plus configurations were observed under construction midway between the Probable Range Headquarters/Complex Control Area and the HEN HOUSE antenna. The one closer to the HEN HOUSE antenna was in an initial construction stage; the other, in a more advanced stage, has crossarms approximately 1,000 and 900 feet long, respectively. No evidence of this activity could be found on photography of []. Earth for constructing the plus configurations apparently was obtained from adjacent borrow pits. From [] work of a minor nature continued on the

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northern plus configuration; the southern one remained unchanged. From the point where a ground scar extends from the Probable Range Headquarters Complex Control Area to the HEN HOUSE antenna, two additional scars were noted on photography of [] one extending to the bisection point of the crossarms of the northern plus configuration, the other extending to the southern plus configuration.



FIGURE 4. PROBABLE RANGE HEADQUARTERS COMPLEX CONTROL AREA. []

TEST, FABRICATION, SUPPORT, AND WAREHOUSE AREA

No change was noted between [] in the Test, Fabrication, and Support Facilities comprising this area (Figure 5). In the Warehouse Facility during this period seven warehouses of various sizes and positioned in two rows were completed close to the east side of a new rail siding. Most of these warehouses were under construction in []. A fence existing at the site of the new warehouses has been dismantled. No new buildings were erected along the west side of the new siding.

MAIN SAM SUPPORT FACILITY

The main SAM support facility for SSATC (Figure 5) is a fence-enclosed road-served

area located 1.6 nm northwest of the center of the primary Sary-Shagan Airfield. It was under construction in [] and appeared virtually complete by []. [] photography shows the components to be similar to those found at conventional SA-2 SAM support facilities elsewhere in the USSR. No significant change was observed in components from []. Numerous vehicles or pieces of equipment were observed lined up along the northwest and northeast boundaries of the facility in []. A dark ground pattern along the south-central boundary on [] photography had increased in size by []. A dark pattern, possibly a ditch, is noted just south of the main assembly/receiving building.

SA-2 SAM SITES

Four operational SA-2 SAM sites and their associated on-site support facilities have been deployed to date at SSATC -- at Launch Complex A, at Launch Complex B, near Instrumentation Site 2, and near the primary airfield. All sites were constructed or under construction sometime between [] and are of the hexadic star type. No recent change was observed in facilities at the launch sites except for the addition of an unidentified structure just outside the fenced area at the SA-2 site near the airfield. This structure appeared between []

No recent change of significance was observed at associated on-site support facilities except for the addition of one building (approximately 110 by 65 feet) at SAM Site C35-2 near Launch Complex A between []. Probable equipment at the four sites has varied from mission to mission. The on-site support facilities are generally similar, consist-

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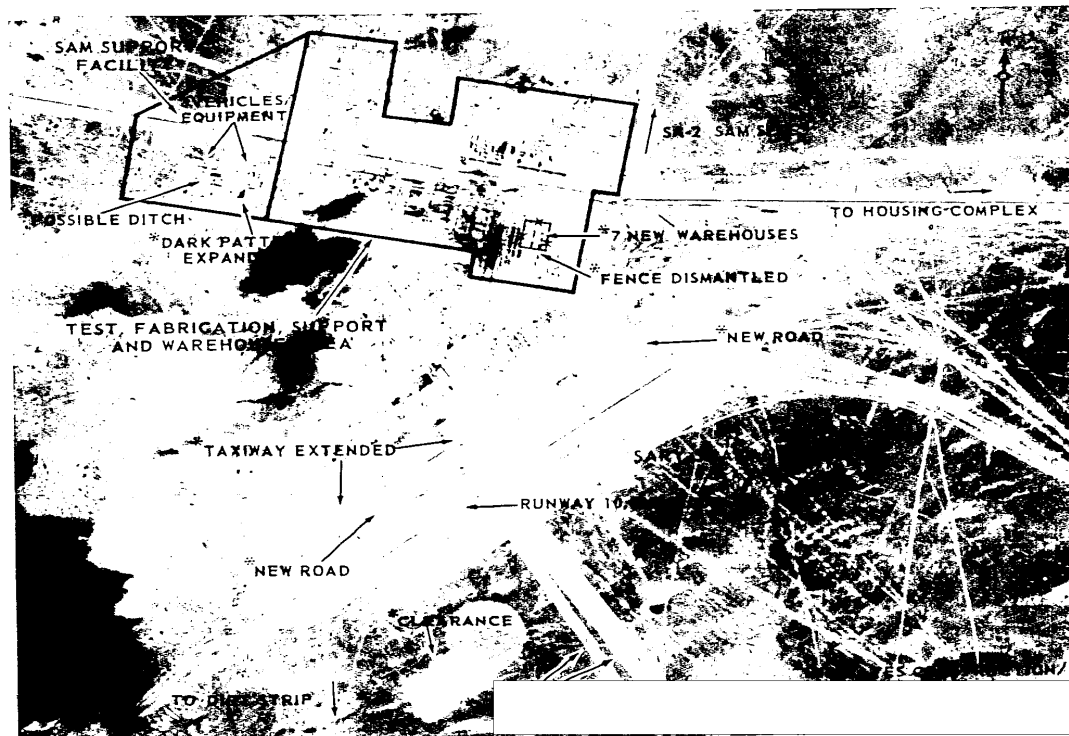


FIGURE 5. SARY-SHAGAN AIRFIELD, TEST, FABRICATION, SUPPORT, AND WAREHOUSE AREA; AND SAM SUPPORT FACILITY.

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ing of one long revetted building (probably for missile ready storage), one building (approximately 110 by 65 feet), and several other smaller support structures. The 110- by 65-foot building, which may provide limited checkout capabilities, is present at SAM Sites A26-2 and C35-2 and possibly at SAM Site B19-2. None can be identified to date at SAM Site B27-2. These on-site support facilities differ in size, layout, and buildings from the conventional on-site support facility.

SAM TRAINING CENTER

Photography of [REDACTED] revealed the existence of a SAM Training Center (Figure 6) approximately 41 nm south-southwest of the village of Sary-Shagan. The Center consisted primarily of a rectangular area, probably secured and measuring 3,170 by 885 feet, with three SAM launch sites positioned inside. The rectangular area is oriented north-south along its major axis. Immediately to the east were one main support area and 4 smaller support areas having a total

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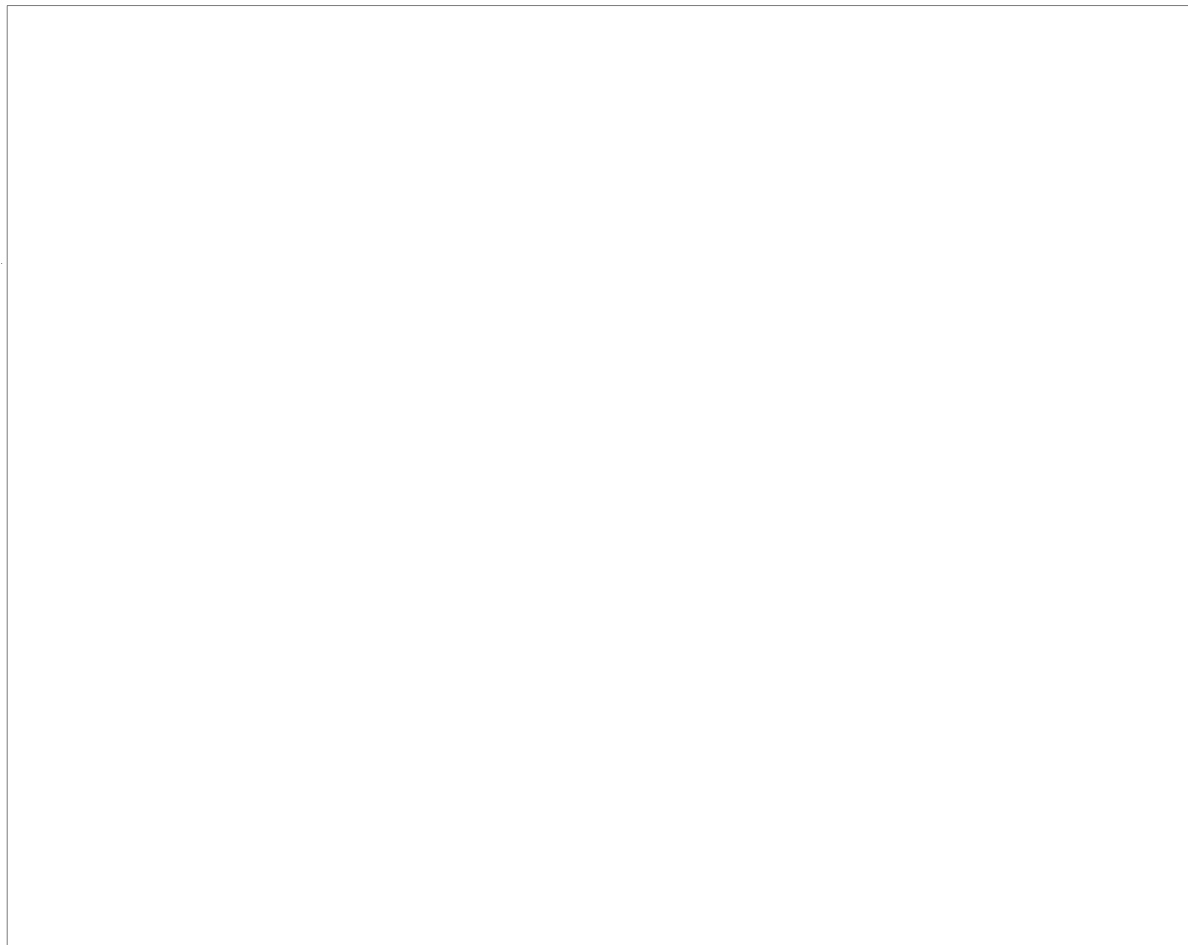
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of approximately 10 structures, and 2 probable motor pools, which appeared to be secured. Approximately 2,300 feet south of the rectangular site was an unidentified road-served structure.

Between considerably more trackage was observed at the Center.

An additional SAM launch site appeared adjacent to the north boundary of the rectangular site with an area of unidentified scraping just beyond to the north. A probable launch site appeared adjacent to the south boundary. Activity has been observed at the two probable motor pools in this period.

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In the main support area 4 structures were added, and 2 small additional support areas with unidentified structures or vehicles were observed at the Center. There was no significant change in facilities from [redacted]. Activity was observed at one or more of the central areas of the three launch sites within the rectangular area in [redacted]. Interpretation of the Center is generally limited on most missions by haze, clouds, and cloud shadow.

SARY-SHAGAN AIRFIELD

Sometime between [redacted] the taxiway paralleling and just north of the runway at Sary-Shagan Airfield (Figure 5) [redacted] was extended from 6,000 to 10,000 feet, the full length of the runway. In the same period two short road spurs were constructed from the parallel taxiway to the two navigational aids between the runway and parallel taxiway. Between [redacted] two strips were cleared adjacent to and a short distance from the 5,175-foot-long strip extending south from the primary runway. No additional work appeared to have been accomplished beyond initial clearance on these strips, which also are approximately 5,175 feet long. On [redacted] the northwest-southeast strip and the primary runway were free of snow; the two recently cleared strips remained snow covered. On [redacted] all three northwest-southeast strips were snow covered. The circular 2,000-foot-diameter cleared area and the rectangular cleared area just west of the three northwest-southeast strips showed no sign of usage or of snow removal. The rectangular area appeared to have received additional clearing between [redacted]

DIRT STRIP

Between [redacted] the only change apparent at the dirt strip (Figure 7), approximately 4.5 nm south-southwest of the airfield, was the appearance of an inner marker

beacon 3,000 feet southwest of and aligned with the center of the strip. A possible outer marker beacon was observed 10,000 feet southwest of the strip. Earth scarring was noted in [redacted] just north of the center of the strip and just north of the east end of the strip. Between [redacted] the only discernible change was the conversion of the scarred area north of the center of the strip into an unidentified triangular area. Between [redacted] the strip was widened from approximately 270 to 625 feet. On [redacted] the strip had been cleared of snow, as were sections of the roads in the immediate vicinity of the strip and the triangular area just north of the center of the strip. The road to the primary airfield had not been cleared of snow. On [redacted] the strip was completely snow covered although most of the facilities at the primary airfield had been cleared. Removal of snow had started on the road extending from the airfield to the dirt strip.

From [redacted] the dirt strip was widened from 625 to 1,500 feet. It was lengthened slightly at the southwest end, giving a total of 16,500 feet; at the same time additional ground scarring and several small unidentified structures appeared at the east end of the strip.

Photography of [redacted] showed the triangular pattern north of the center of the strip had assumed a rectangular shape, with extensive ground scarring at the site. Work continued into [redacted] and several small unidentified structures were observed at the site.

INITIAL SUPPORT AREA

Between [redacted] the following construction took place in and near the housing and support facility of the Initial Support Area which is located in the northern part of the Support Base: 2 large buildings in the southern section, 2 long rectangular buildings in the cen-

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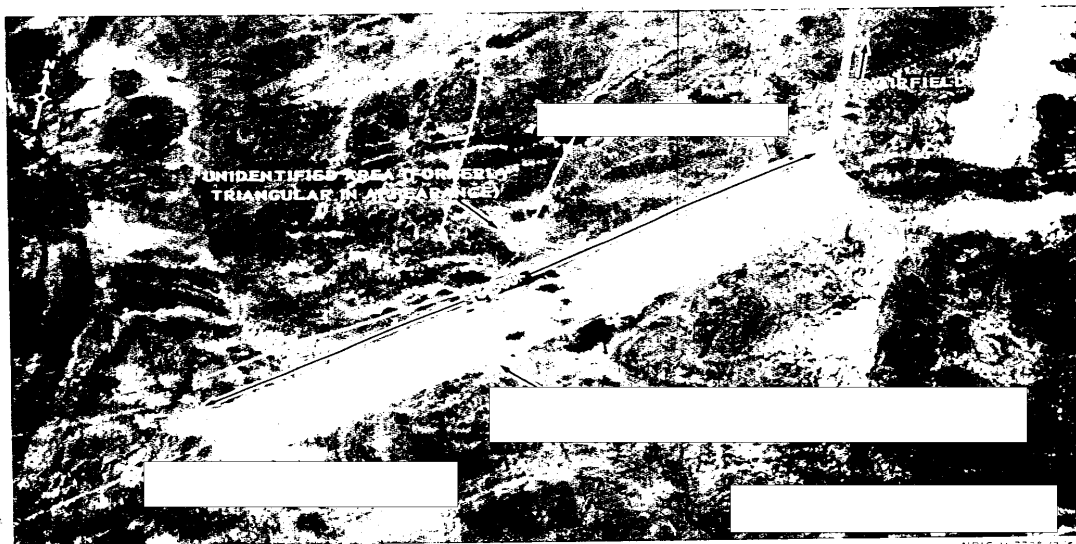


FIGURE 7. DIRT STRIP [REDACTED]

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tral sector, 8 small buildings in the northern section, 12 buildings north of the area, and one warehouse along the rail line forming the northern boundary of the area.

CONSTRUCTION SUPPORT AND STORAGE AREA

No significant change has been noted in the permanent facilities in the Construction Support and Storage Area since [REDACTED] except for the addition sometime between [REDACTED] of a large multistory building in the east-central sector just south of Barracks Site No 1. Photography of [REDACTED] showed construction to be continuing at the multistory building.

EXPLOSIVES STORAGE AND HANDLING AREA

The Explosives Storage and Handling Area (Figure 8) consists of two separate, double-

fenced road-served facilities. Components observed in [REDACTED] in the smaller of the two facilities are now complete. A loop road has been constructed serving the drive-through building and there are two probable buried tanks positioned one on either side of the revetted structure. By [REDACTED] a small administration-type building had been constructed at the entrance to the facility and a ground scar appeared from the steam and heat plant to a small structure near the drive-through building. Photography of [REDACTED] reveals activity near the southwest corner of the facility. Four walls of an unidentified structure approximately 110 by 100 feet were being erected during this period, and three vehicles or pieces of construction material observed at the site in [REDACTED] were

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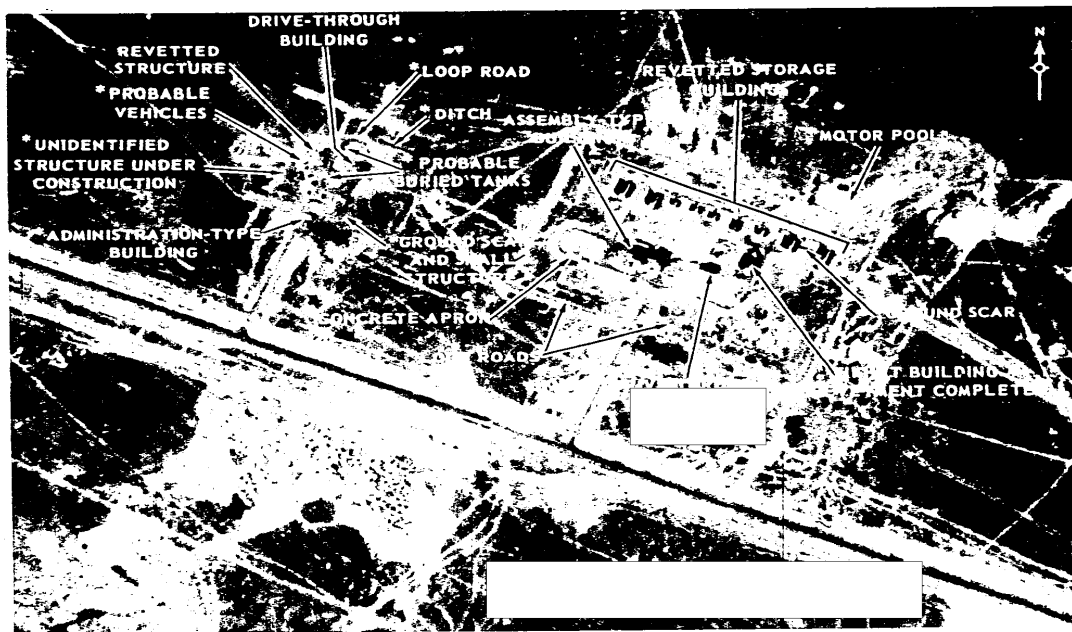


FIGURE 8. EXPLOSIVES STORAGE AND HANDLING AREA

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not present the following month. A ditch is visible in the northeast corner of the site.

In the larger of the two facilities, building and road construction observed in [redacted] had been completed by [redacted]. The revetted storage buildings appeared unchanged from [redacted] except for the addition of a ground scar between the two more easterly. The revetment serving the Hi-Hat building had been completed. The drive-through building, 105 by 65 feet, remained unrevetted and complete. The revetment along the south side of the assembly-type building (135 by 95 feet) remained shorter than the other. Loop roads were constructed near the southwest corner and in the south-

central sector during this period. A motor pool was visible just outside the northeast corner of the facility. A road leads north from the site for a distance of approximately 2,800 feet to a point where it forms a loop containing a possible structure.

HIGH EXPLOSIVES STORAGE AREA

This area (Figure 9), situated approximately 1.5 nm southwest of the Probable Microwave Terminal along the western edge of the Support Base, on KEYHOLE photography of [redacted] appeared as a possible storage area under construction. Better coverage of [redacted] reveals that it is a completed high explosives

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storage area, possibly for construction purposes. No additional facilities of significance were added between [redacted]

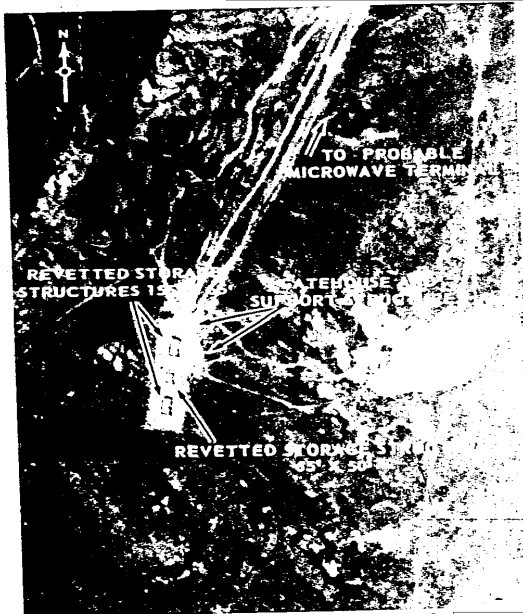


FIGURE 9. HIGH EXPLOSIVES STORAGE AREA [redacted]

The area (360 by 270 feet) consists of three low structures revetted on three sides. Two of these structures are similar, measure approximately 155 by 65 feet, and have two extended entrances and an object on the southeast corner of each roof. The third and smallest structure is approximately 65 by 50 feet. Several very small support structures are located inside the cleared area and just outside the north boundary. The area and access road had not been cleared of snow on photography of [redacted]

PROBABLE MICROWAVE TERMINAL

Facilities at the Probable Microwave Terminal, which is located at the western edge of the Support Base, appear unchanged since [redacted]

INSTRUMENTATION SITE 1

Change continued in the facilities at Instrumentation Site 1 (Figure 10) since [redacted]. The interferometer appeared in [redacted] essentially as it did in [redacted]. The crossarms were not visible, and what seemed in [redacted] to be small plowed or scarred patches of various sizes in the center mound area still appeared generally the same in size and number. The fence and circular road remained. In the support area 12 buildings were added between [redacted]. No significance change was observed here between [redacted]. From [redacted] approximately 10 buildings and structures of various sizes were added to the control area and the probable instrumentation area. These include two buildings (each approximately 90 by 60 feet) at the base of an L configuration southwest of the control area close to the edge of a circular mound 450 feet in diameter. These buildings, tracking facilities, each appeared to be multistory and to have an unidentified object on the center of the roof. The distance between building centers measures 420 feet. Approximately 3 very small structures of the total of 10 were constructed in the vicinity of the L configuration by [redacted]. From [redacted] eight buildings were added to the control area of which one building is situated along the L configuration. Additional scarring and evidence of extensive vehicular traffic have occurred since [redacted]. Of interest is an area of activity near the northeastern boundary of the control area where new building construction of an unidentified nature was observed and conduits ground scars were being added. Although rhombic antennas cannot be dis-

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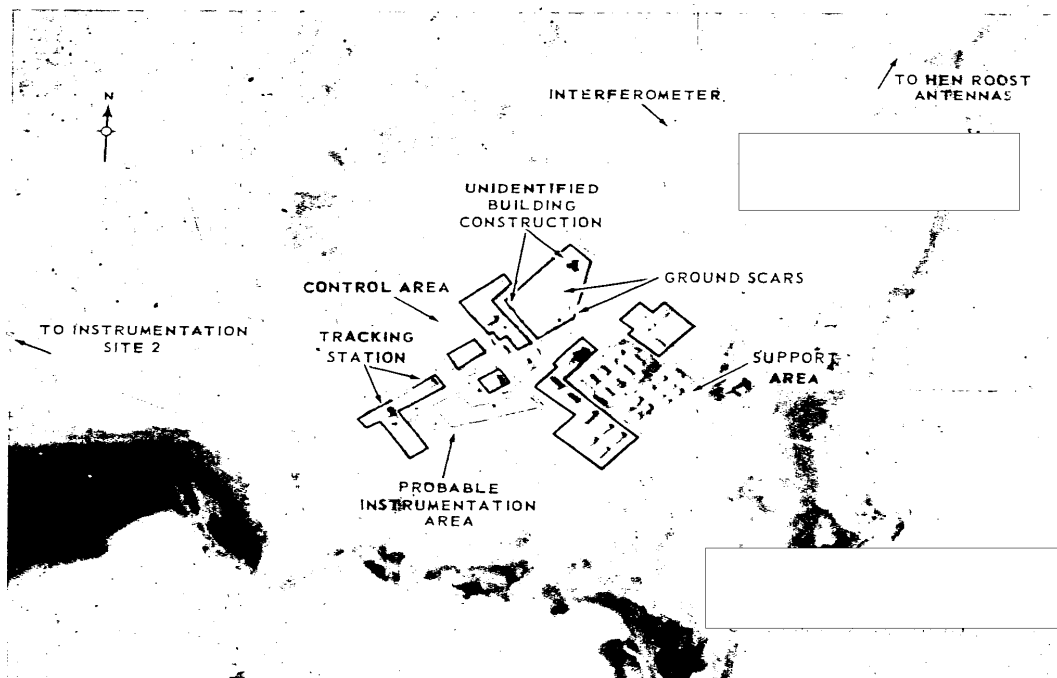


FIGURE 10. INSTRUMENTATION SITE 1

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tinguished on available photography, the sites of the antennas observed on TALENT photography have been relatively undisturbed by trackage and ground scars since [redacted]

INSTRUMENTATION SITE 2

Instrumentation Site 2 (Figure 11) was composed in [redacted] of a radar operations area, a support area, and a tall self-supporting lattice tower. The radar operations area bore a certain resemblance to facilities observed at Electronic Site C at Launch Complex A. Between [redacted] the SA-2 SAM launch site and support facility were constructed. Changes of note appeared at Site 2 from [redacted]

[redacted] Two components of a triad of buildings were visible for the first time on [redacted] photography constructed along the southern boundary of the radar operations area. Chronological development of this triad, where construction continues, can be found in Table 1. This triad compares favorably with building triads which were constructed subsequently at four SA-1 sites near Moscow. In [redacted] a building, approximately 135 by 125 feet, appeared to be under construction just north of the modified L-shaped building in the radar operations area. By [redacted] this building appeared complete with a relatively

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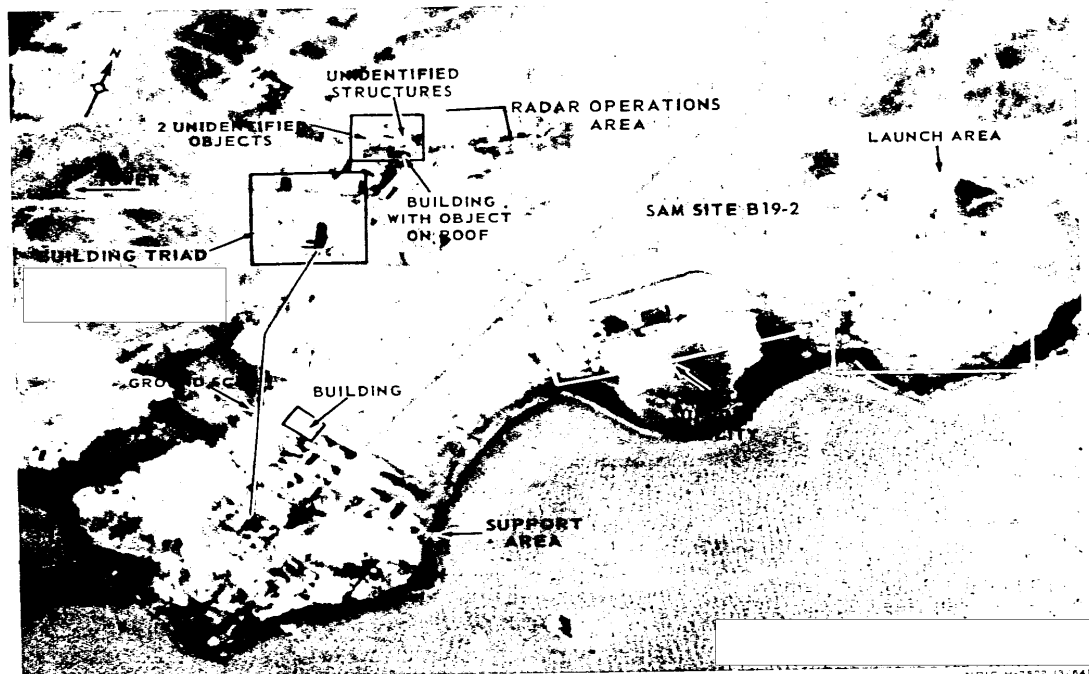


FIGURE 11. INSTRUMENTATION SITE 2 AND SAM SITE B19-2

large object on the roof, which was considerably larger than the roof objects on the small buildings of the triad. By [] a narrow structure paralleling and just north of this building had appeared and a connection was visible between this recently constructed building and the modified L-shaped building. Activity in the general area of this new building and the triad since [] has consisted of a number of small structures and in [] two unidentified light-toned objects were apparent here. A ground scar appeared between [] extending from the large rectangular building of the triad to the support area of the site. From []

[] one new building was added in the support area.

COMMUNICATIONS SITE 1

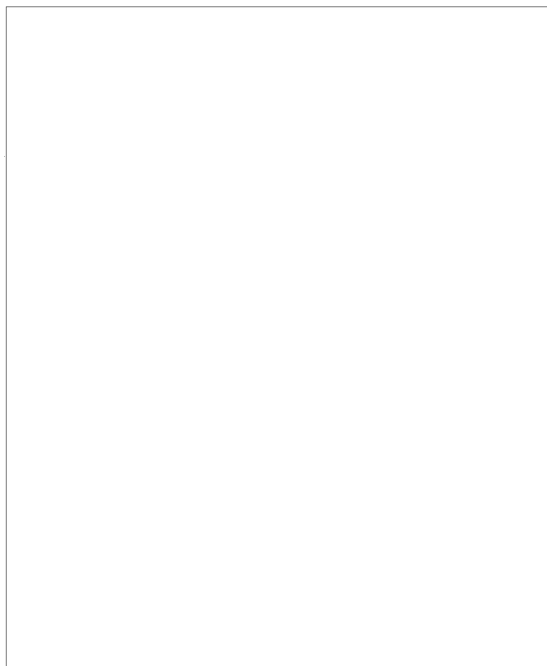
At Communications Site 1 (Figure 12) just west of the Main Housing Complex, KEYHOLE photography reveals additional probable dipole antennas of undetermined number since [] in the northeastern sector, paralleling many of those previously observed and forming a roughly semicircular pattern north of the control building. Several very small structures have been added since [] one just southeast of the control building, three along the southern

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fence line and one small building along the southern fence line. This building was observed to be under construction from [redacted] and during the same period a number of ground scars appeared on the west side of the service road; one extended from this new building to the control building and in [redacted] extension was noted beyond to the northeast. A rectangular pattern of scars also appeared between the service road and this new ground scar. The field of double rhombic antennas observed on TALENT photography of [redacted] close to the western

boundary of the site is not discernible on the KEYHOLE photography.

COMMUNICATIONS SITE 2

At Communications Site 2, just north of Instrumentation Site 1, are noted on [redacted] photography the control building, the guard building, and 6 very small structures or vehicles (4 of which were not visible on [redacted] photography). The rhombic antennas observed along the eastern and western boundaries of the site on TALENT photography are not discernible on the KEYHOLE photography.

COMMUNICATIONS SITE 3

Recent photography of this site is of relatively poor quality. The site is approximately 16 nm west of Launch Complex B in the Impact Area and was under construction in [redacted]. On photography of [redacted] the following were observed: 2 unidentified structures in the northernmost area of the site, one structure in the area second from the north, one in the southernmost, and approximately 7 structures in the central and principal area. A detailed description of these facilities is not possible. Several small additional sites have been cleared and may be occupied. The possible airfield reported from [redacted] photography just southwest of the site remains unchanged.

POSSIBLE INSTRUMENTATION SITE

A site located approximately one nm southwest of the HEN HOUSE Antenna and reported [redacted] as a possible instrumentation site has not developed into such a site. The limited number of facilities and scarred area remained in [redacted] essentially as they appeared on photography of [redacted]

LAUNCH COMPLEX A

(Figure 13)

HEADQUARTERS AND ADMINISTRATION AREA

In the Headquarters and Administration Area (Figure 14) relatively few changes oc-

curred during the period from [redacted] and these were primarily in the warehouse section, the possible electronic site,

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and SAM Site C35-2. No change of significance was noted in the housing section during this time. Four relatively large warehouses and 3 small buildings were added along the southern and western areas of the warehouse section. In the possible electronic site, development took place principally in the western area. Two large rectangular buildings (observed under construction in [] have been completed here and another one constructed in addition to 8 small buildings. Better photography of the complex has permitted identification of certain facilities which existed before but were not sufficiently clear for identification. In the SA-2 SAM on-site support a new rectangular building and two very small structures have been added during this period. No change in permanent facilities is

noted at the airstrip southwest of the headquarters and administration area since [] however, photography of [] reveals a landing T on the strip. Five small buildings and 8 very small structures in the airstrip support area are more distinct than previously and have undergone no apparent change since [] the entire strip was cleared of snow; however, the access road to the Headquarters and Administration Area had not yet been cleared.

LAUNCH SITES 1 AND 2 AND ELECTRONIC SITE A

(Figure 13)

Launch Sites 1 and 2, which were observed to be complete or nearly complete in [] and probably complete by [] resemble in certain respects the fan-shaped sites of the SA-2 SAM launch system. Both sites consist of 5 or possibly 6 drive-through launch positions, a central unrevetted guidance area, and an outer service road. The diameter across the site from launch position to launch position is approximately 500 feet. Good-quality current photography reveals the existence of a tower in the area between the two launch sites. The two sites are double fenced, at least on two sides, and at least three probable guard posts and a gatehouse are positioned along the fence. Revetments are not discernible at the launch positions of either site although those at SAM Site C35-2 are clearly visible. During the period [] activity seemed to be focused primarily on the central guidance area and on a small hardstand along the outer service road of each site.

The central guidance area at Site 1 in [] appeared to consist of 5 structures (2 relatively large) and a number of pieces of equipment or vehicles. The number of pieces of equipment

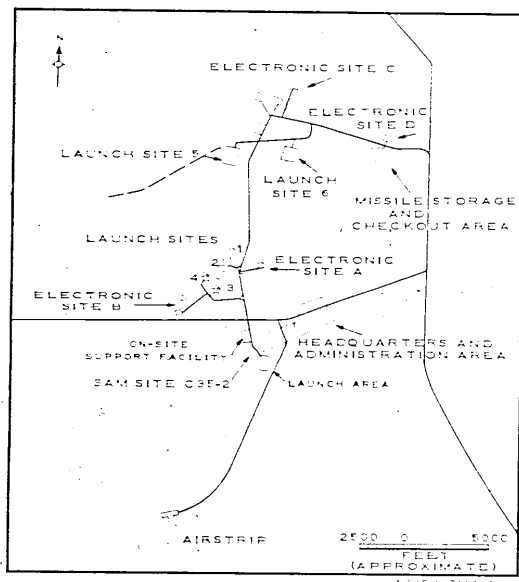


FIGURE 13. LAUNCH COMPLEX A.

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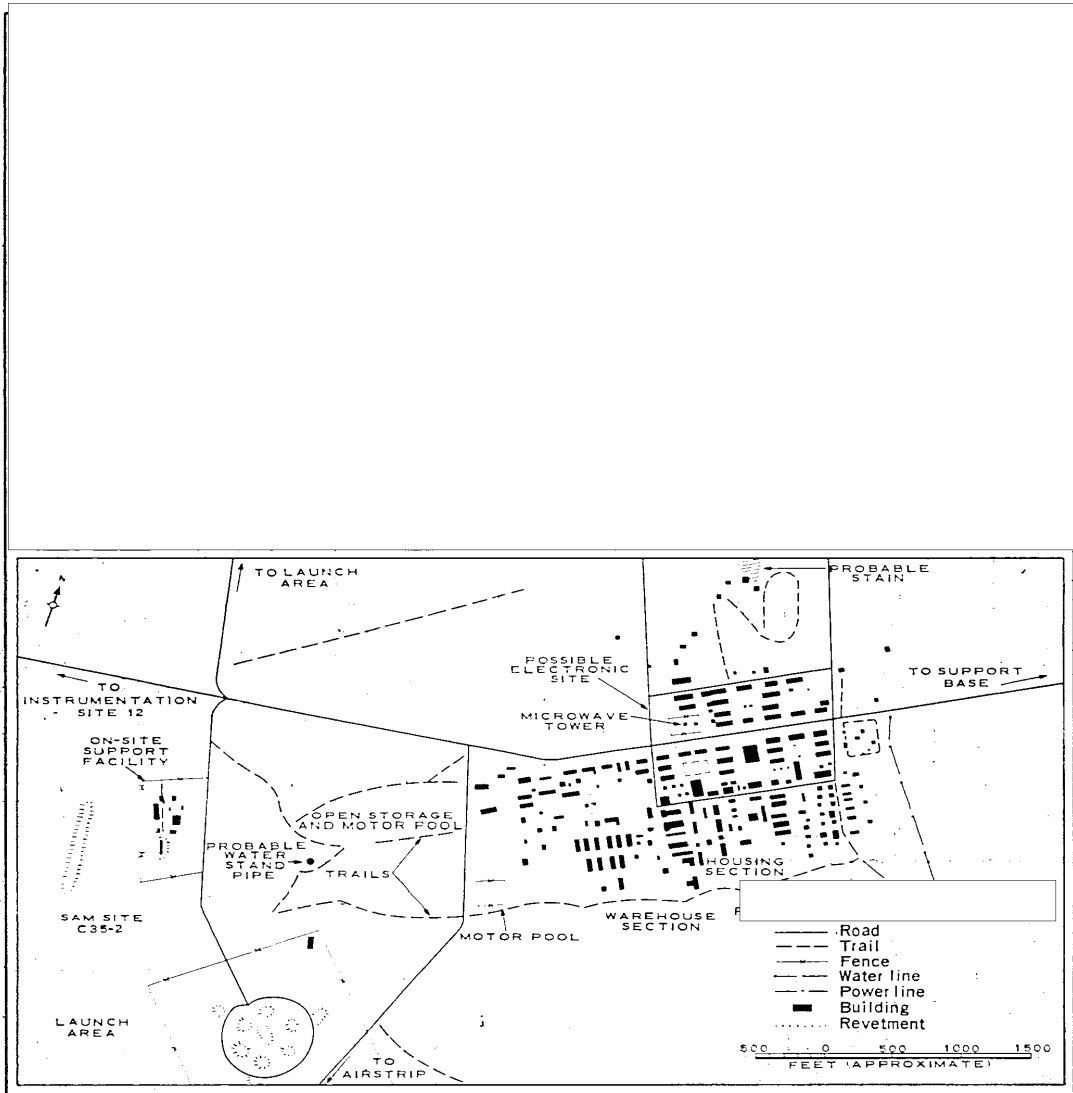


FIGURE 14. HEADQUARTERS AND ADMINISTRATION AREA, LAUNCH COMPLEX A.

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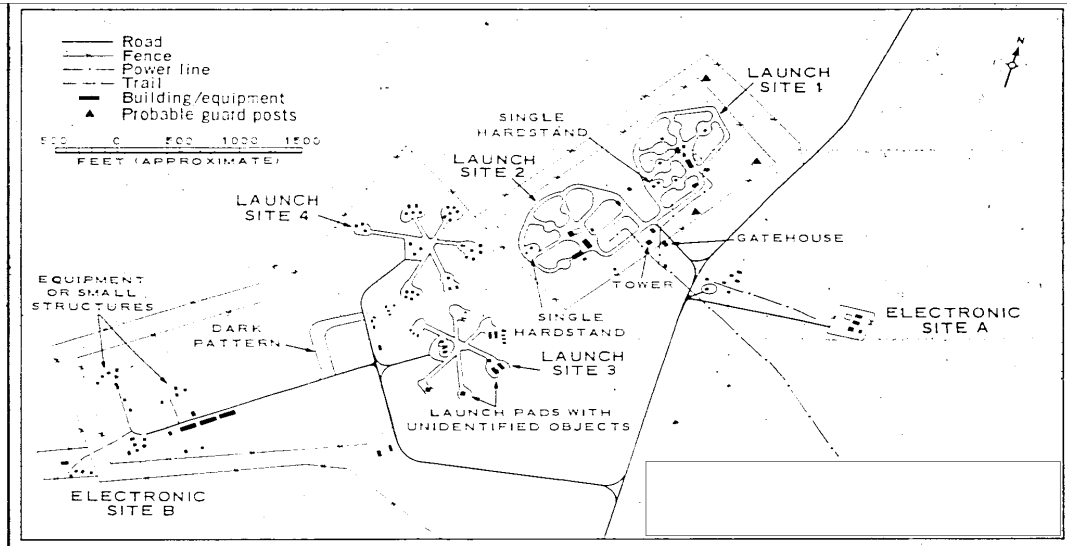


FIGURE 15. LAUNCH COMPLEX A--LAUNCH SITES 1-4 AND ELECTRONIC SITES A AND B

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or vehicles has changed from time to time, and sometime between [] one of the two large structures was removed. The launch positions appeared relatively inactive, although a very small object with little or no height was barely discernible on the majority of the launch positions.

The central guidance area at Site 2 decreased from 4 structures in [] to 3 in []. The launch positions appeared relatively inactive when photographed. The small hardstand along the outer service road was usually occupied by a varying number of vehicles and/or pieces of equipment, and in [] and [] by an object with height and two very small structures.

The two largest structures at Electronic Site A have remained from [] but smaller structures or equipment have shifted from time to time. There was no evidence of this site in [] the site was complete or nearly complete.

LAUNCH SITES 3 AND 4 AND ASSOCIATED ELECTRONIC SITE B (Figure 15)

Launch Sites 3 and 4, which were not present in [] were observed under construction in [] and appeared complete and active by []. The sites are of similar configuration and are generally circular. Each is composed of six unrevetted launch positions of peculiar shape and an unrevetted central guidance area. The launch positions are not drive-through. The distance across each site from launch position to launch position is approximately 750 feet. The radial pattern previously observed connecting launch positions and intersecting in the center of the site appears on [] KEYHOLE photography to form an internal road system. Perimeter roads have not been constructed around the sites. Equipment frequently can be seen, however, using the natural terrain for parking.

The central guidance area, bordered by the intersection point of the radial road pattern on the one side and by a semicircular road pattern on the other, appears to consist of a small road-served concrete pad occupied by small pieces of equipment or vehicles. These change in number and position from mission to mission.

Photography of Launch Site 3 in [] revealed a pair of unidentified objects each approximately 50 by 20 feet and located on the outward portion of each launch position. These objects appeared generally in the same position on photography of []. Only two launch positions were occupied by these objects and one or two smaller objects. The remaining four launch positions were either unoccupied or occupied by from one to three small objects. The two launch positions continued to be occupied in [] by the pair of large objects. The smaller objects have shifted on the other pads during this period. Four small objects were observed on the terrain adjacent to the launch positions.

The best coverage of Site 4 since [] is that of [] which revealed the site to be active with a varied number of small objects on the front and rear sections of all six launch positions. As many as six of these objects were noted on one position and a number were positioned on the adjoining terrain. Little change in activity was noted at Site 4 on coverage of []. A study of photography of [] revealed that the immediate access road to Sites 3 and 4 had not been cleared of snow nor did the launch positions appear to have been cleared, at least since the last snowfall. Photography indicated the possibility of a number of recent snowstorms in the area. The 50- by 20-foot objects deployed on launch positions at Site 3 were not present at Site 4 on [] coverage. Electronic Site B was observed to be under construction in [] and to be com-

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plete or nearly complete by [redacted]
Between [redacted] a third building, approximately 100 by 40 feet, was constructed along one leg of the L-shaped pattern comprising Electronic Site B. On the two hardstands along the base of the leg and on adjoining terrain approximately 16 pieces of equipment or vehicles were positioned in [redacted] and [redacted]. A slight increase was noted in [redacted] in pieces of equipment or vehicles, which then totaled 20. The area was relatively active on all available coverage. The area adjacent to and just beyond the double-fenced area of this site which was composed of two small buildings in [redacted] was observed by [redacted] to be separately fenced and to contain three additional very small structures or pieces of equipment.

The unusual road pattern located between Launch Sites 3 and 4 and Electronic Site B which appeared on [redacted] photography as a possible building appeared on [redacted] photography as a dark pattern and had not developed into a building.

LAUNCH SITES 5 AND 6 AND ELECTRONIC SITE C (Figure 16)

Launch Sites 5 and 6 and Electronic Site C are similar in many respects to the three operationally deployed probable AMM launch complexes and their associated electronic facilities near Leningrad.

Launch Site 5

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Relatively little if any change is observed in major facilities at this site from [redacted] however, equipment in varying amounts is noted and activity generally changes from mission to mission. Good-quality photography reveals the site to consist of a curved probable missile-hold/launch building (110 by 60 feet), three roughly wedge-shaped launch positions approximately 210 feet apart, a bunker, an unidentified building (75 by 50 feet)

just east of the curved building, and a tower-like structure adjacent to the south side of the unidentified building. The probable missile-hold/launch building appeared to exist in an undetermined construction stage in [redacted]. The height of the building remains undetermined. A study of [redacted] photography revealed the presence of two long vehicles and a gray pattern with no apparent height, positioned perpendicular and adjacent to the east side of the curved building. Just north of this building and apparently associated with the northernmost launch position was a gray pattern having no apparent height but resembling a segment of the curved building. An object with height was observed just west of this pattern. Pieces of equipment or small structures were noted at the site on and between each of the three launch positions as well as scattered along the site. The 75- by 50-foot building did not appear to be drive-through but rather to be served by a narrow apron or road.

Launch Site 6

Components of Launch Site 6 did not change significantly from [redacted]. This site is generally not as active as Site 5. Features similar to those found at Site 5 include a curved probable missile-hold/launch building (110 by 60 feet) and a building (75 by 50 feet) with an adjacent tower-like structure to the south. This site differs from Site 5 in having no bunker and in having only 2 instead of 3 launch positions. Equipment was positioned on, as well as between, each of these launch positions. The distance between the centers of the launch positions is approximately 210 feet. The curved building did not appear to exist [redacted] but was noted for the first time in [redacted]. The 75- by 50-foot building did not appear to be drive-through but to be served only by a wide road or apron from one side. Just north of the curved building and apparently associated with the northern launch position ob-

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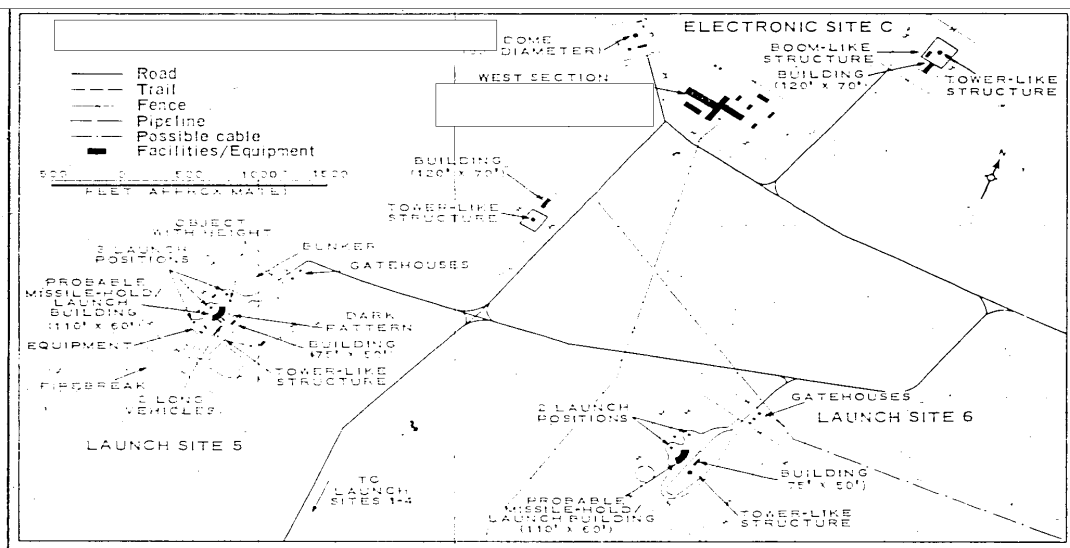


FIGURE 16. LAUNCH COMPLEX A--LAUNCH SITES 5 AND 6, AND ELECTRONIC SITE C.

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served on [] photography was a dark pattern with no apparent height and resembling a portion of the curved building.

Electronic Site C

The large central facility is the only one of the four facilities comprising Electronic Site C to have undergone significant change from []

[] During that time the large modified L-shaped building was under extension to the west. Exterior construction of this extension, approximating 300 feet in length, appeared complete by [] This extension is wider, is not aligned with the remainder of the building, and is alternately dark and white in appearance. Roof details of this extension cannot be determined; however, the center roof section appears somewhat elevated. This central facility is situated approximately 4,000 feet northeast of the curved building at Launch Site 5 and 3,200 feet north-northwest of the curved building at Launch Site 6. The other eight buildings remain essentially unchanged since []

The 50-foot dome observed in [] remains in a fenced area, approximately 800 feet northwest of the central facility. One small building and three very small structures or vehicles also are noted close to the dome on photography of [] Just north-northwest of the dome are one or two very small unidentified structures.

The two extremities of Electronic Site C are approximately 3,800 feet apart and show no significant change since [] At the southwest extremity, the tower-like structure which was present in [] remains centered on a large apron serviced by an adjacent probably semiburied building (120 by 70 feet). This building is in turn serviced by a narrow apron. At the northeast extremity generally similar facilities are present. A tall boom-like structure appeared in [] near the tower-like structure.

MISSILE STORAGE AND CHECKOUT AREA AND ELECTRONIC SITE D

(Figure 17)

Changes observed in both Electronic Site D and the Missile Storage and Checkout Area from [] consist only of the addition of several small structures and a probable vehicle in the latter area. Better photography, however, has permitted identification of a number of additional buildings which existed previously but were not sufficiently clear for identification. Of interest is a newly identified separately fenced facility along the west-central boundary of the Missile Storage and Assembly Area composed of one partially revetted structure, one probable revetted structure, at least four smaller structures, and several possible long bar-type revetments. This area probably is used for explosives storage and appears to have undergone no significant change since []

All eight major buildings in the Missile Storage and Checkout Area are either drive-through or are served by an apron extending across the entire length of the building. In [] twelve small structures, of which two are new, and one probable vehicle were situated within this area as were five small square aprons. These aprons appear to be used for storage and handling operations rather than as foundations for buildings.

Electronic Site D, just north of the Missile Storage and Checkout Area and approximately 7,900 feet southwest of the central facility at Electronic Site C, appears unchanged in the last year. This separately fenced site is composed of a tower, 2 rectangular buildings, and 6 small structures.

A study of photography of [] revealed both the access roads and area components to be snow covered.

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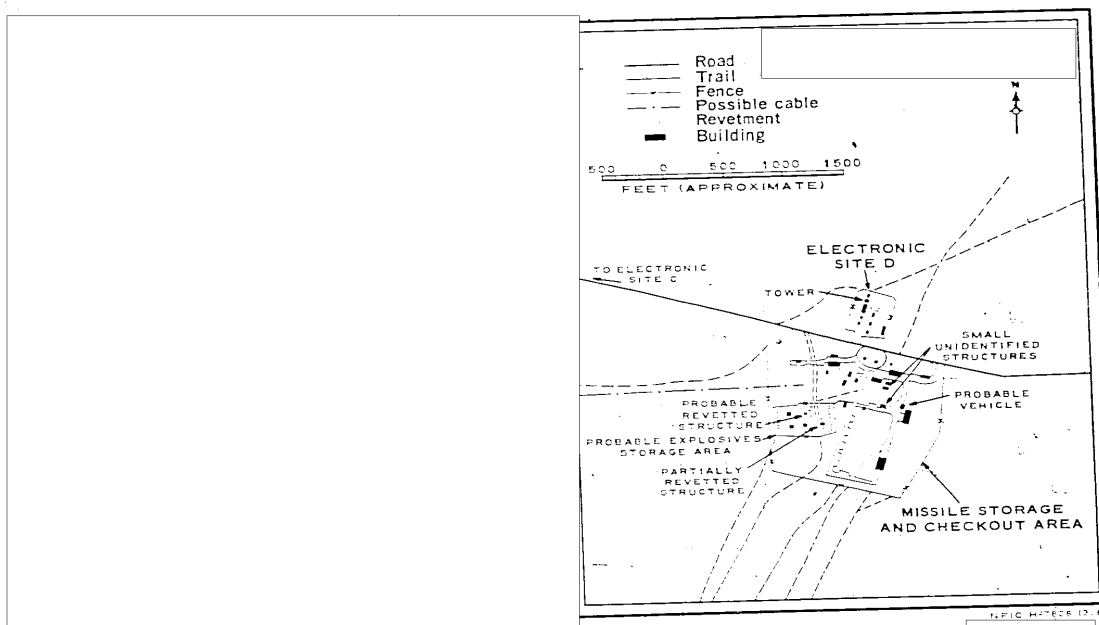


FIGURE 17. MISSILE STORAGE AND CHECKOUT AREA AND ELECTRONIC SITE D, LAUNCH COMPLEX A.

LAUNCH COMPLEX B

SUPPORT AREA

In the Support Area of Launch Complex B (Figure 18) from [redacted] three buildings were added in the housing area and one warehouse appeared to have been removed in the storage area. Certain facilities annotated on Figure 18 indicate new identification rather than new construction.

A study of [redacted] photography reveals the Probable Storage, Assembly, and Checkout Facility to be in an apparent state of abandonment. No new construction is evident since [redacted]. The loop road system which was well defined on [redacted] photography is discernible on [redacted] KEYHOLE photography but shows no evidence of recent usage.

LAUNCH AREA AND BUILDING TRIAD
(Figures 19, 20, and 21)

Facility A

No significant change was observed from [redacted] in Facility A on very small scale photography. The light portion of the rectangular pad has assumed a somewhat tapered appearance at the two western corners. Details of the dark object in the approximate center of the pad are not apparent from available coverage. The facilities and access road were snow covered on photography of [redacted].

Facility B

No apparent change is observed in pads B-1 and B-2 from [redacted]. A dark

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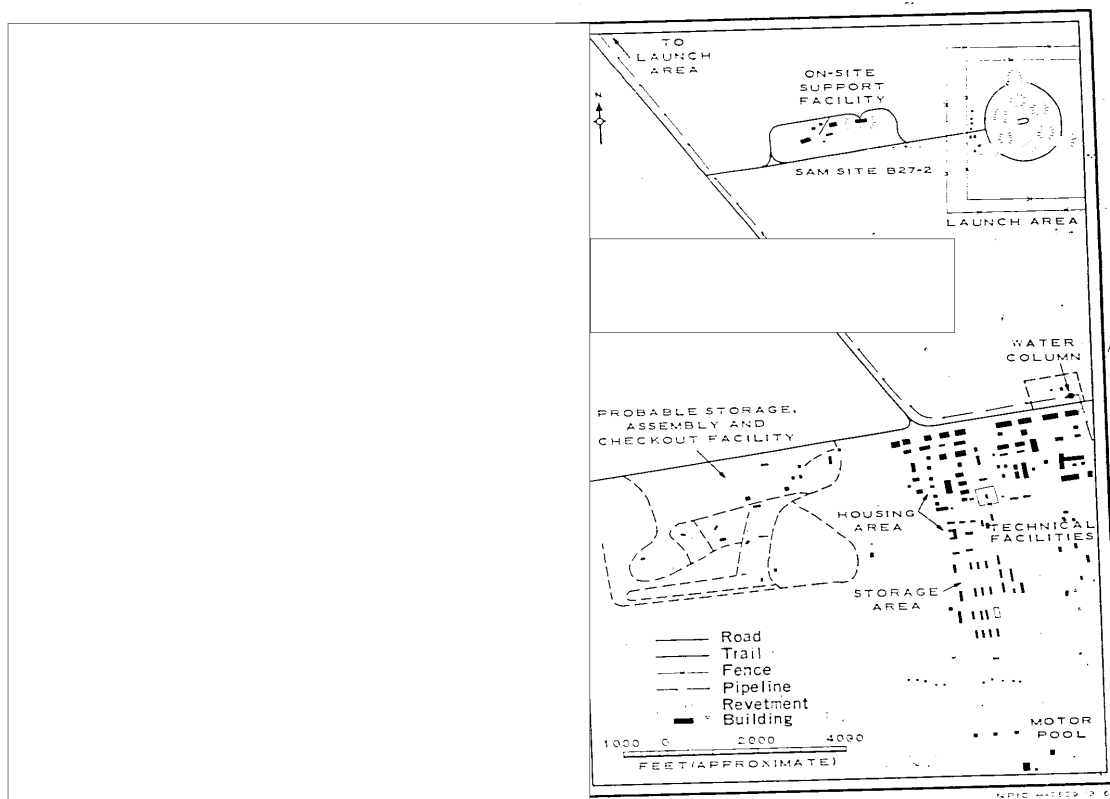


FIGURE 16. SUPPORT AREA, LAUNCH COMPLEX B, AUGUST 1963.

object of undetermined height is noted on all available recent photography in the center of each pad. Pad B-2 does not have the apparent depth of pad B-1. Just north of the center of pad B-2 a very small structure could be identified on [redacted] coverage. Midway between the two pads is the previously identified probable bunker and several smaller facilities or objects.

Close to the southern boundary of Facility B is an unidentified area consisting of a loop road

which has been widened to form an apron along the southern part of the loop. A very small structure or object is positioned in the center of the loop road and four additional structures (including one probable bunker) in the area just north of the loop road. These facilities appeared complete or nearly complete in [redacted] on generally indistinct photography.

Construction has continued at the triad of buildings just southwest of Facility B reported

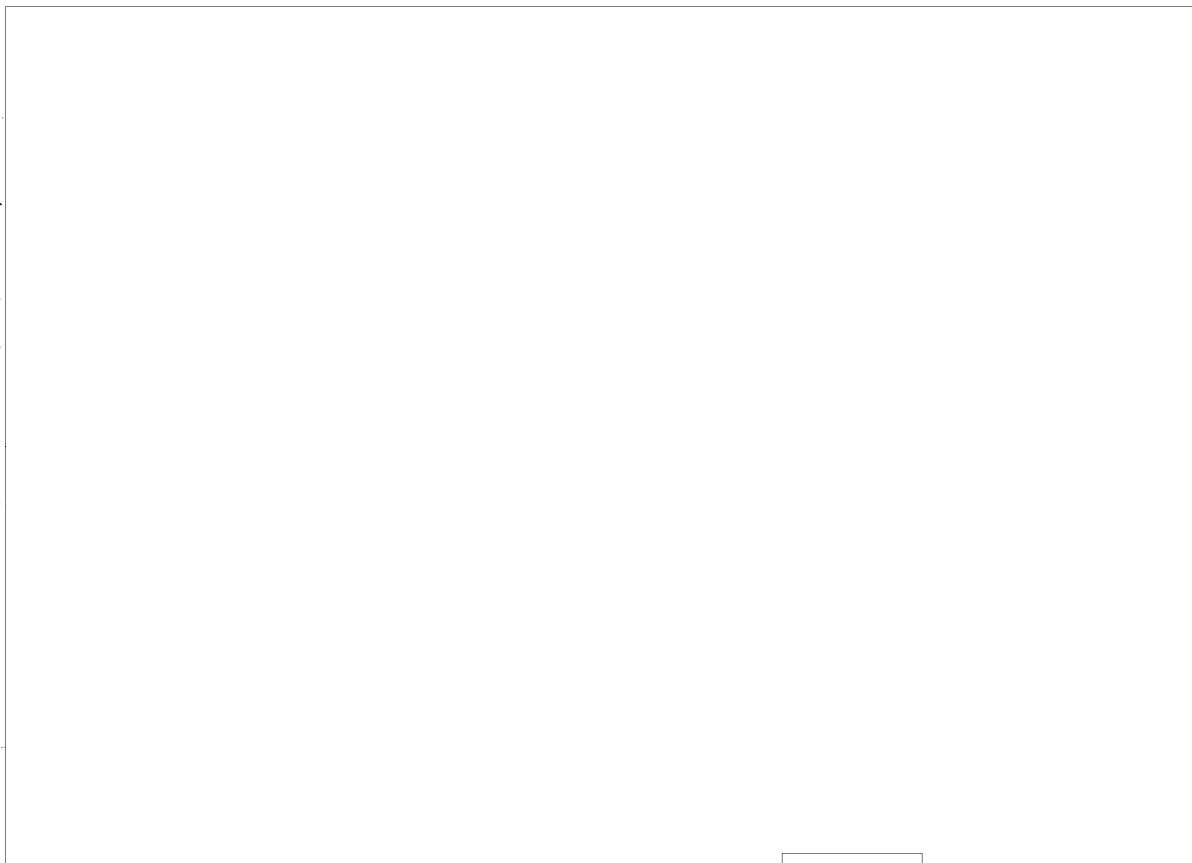
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under construction in NPIC/R-61/63. 5/ From [REDACTED] exterior construction of the two small buildings appears to have been completed. Each has an unidentified object on the center of the roof. The large rectangular building itself appears complete but almost continuous construction activity has been evident on the roof since [REDACTED]. A large circular object was observed on the ground adjacent to the northwest corner of the building in [REDACTED].

25X1

25X1

Photography of [REDACTED] revealed that a tall tower with a circular dish-like or disc-like object on top had been erected on the portion of the building away from the small buildings. A tall crane-like object could be seen just south of the large building in [REDACTED] and appeared to have been moved to the rear of the building by [REDACTED].

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An unidentified structure parallel and close to the rectangular building had been constructed

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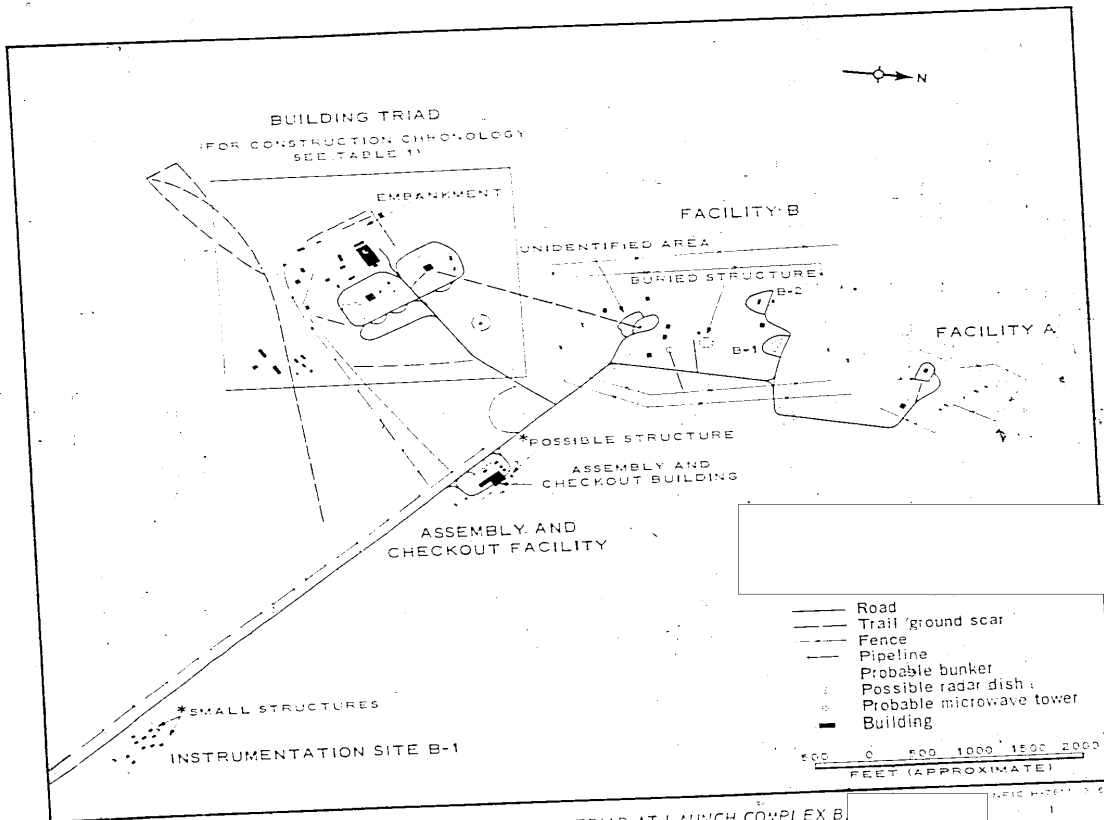


FIGURE 20. LAUNCH AREA AND BUILDING TRIAD AT LAUNCH COMPLEX B.

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by [redacted] It is 150 by 25 feet and, although of undetermined height, is considerably lower than the rectangular building. Parallel to this structure and just west is a long irregular embankment (or mound-like structure) of unidentified nature.

An intricate system of ground scars or conduits has been developed at the site. Just east of the two square buildings is a road system which widens at several places and contains a

small dark pattern in the center of two of the aprons thus formed. Photography of [redacted] revealed a ground scar extending from the northern of the two small buildings in a northeastern direction and by August [redacted] the scar had reached the center of the loop road close to the southern boundary of Facility B. Numerous small facilities and pieces of equipment were observed at the site, some of which had appeared since [redacted]

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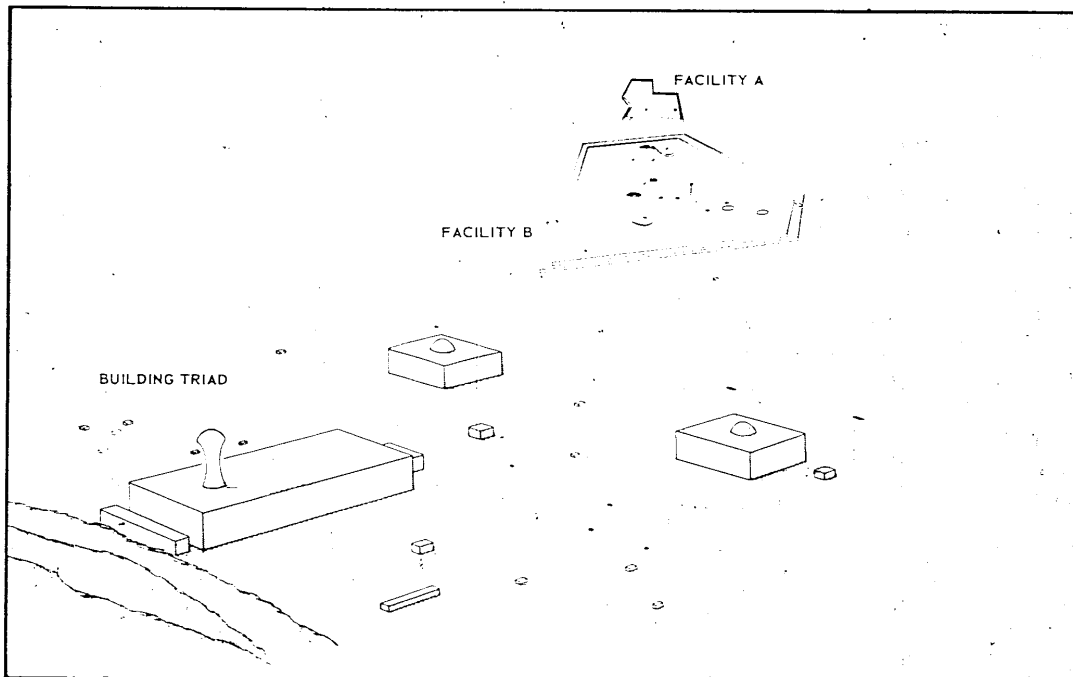


FIGURE 21. PERSPECTIVE OF BUILDING TRIAD, LAUNCH COMPLEX B

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During the winter of [redacted] activity was observed at the building triad and the road from the complex support area to the triad although the road to Facilities A and B remained snow covered.

Assembly and Checkout Facility

25X1

The only discernible change at this facility from [redacted] was the addition of a possible structure along the loop road adjacent to the assembly and checkout building.

Launch Instrumentation Sites

From [redacted] two small structures were added to Site B-1: one just west and the second just east of the observation building. One additional probable structure was added in the northwest corner of Site B-2 during the same period. No significant change was noted at Site B-3 on generally indistinct photography. Coverage is not sufficiently clear to permit interpretation of Site B-4.

INSTRUMENTATION SITE 10

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The most significant development observed [redacted] took place at the triad at Instrumentation Site 10 (Figure 22) from [redacted] of buildings in the southwest corner of the site.

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Details of activity here are presented in Table 1. No additional construction activity of significance is noted in the remainder of the site. An area of unidentified activity located east of the operational area across the main road, reported in NPIC/R-61/63, 5, appears unchanged since

that time and is composed of seven rectangular parallel buildings in one group and seven miscellaneous buildings scattered about the site. No new construction is evident in this latter area on generally indistinct photography.

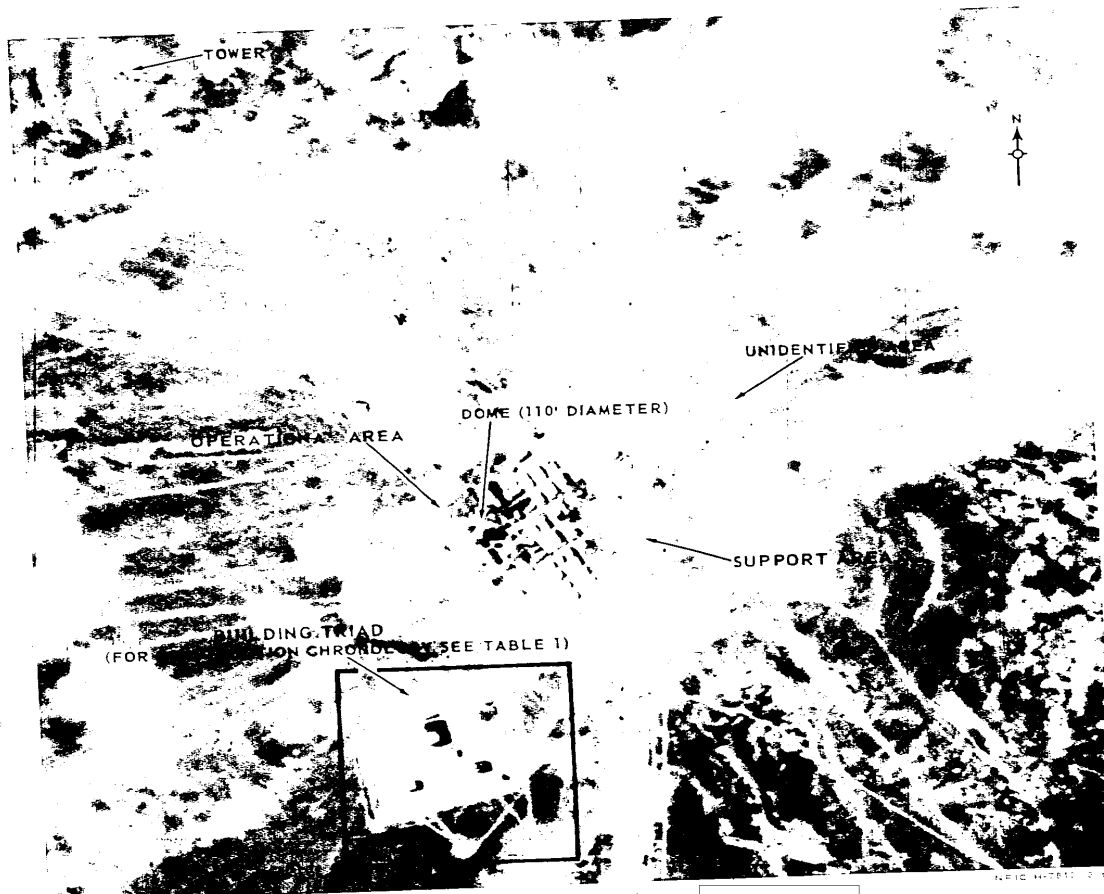


FIGURE 22. INSTRUMENTATION SITE 10.

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POSSIBLE INSTRUMENTATION SITE 13

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A triad of buildings has been under construction since [redacted] at Possible Instrumentation Site 13 (Figure 23), located on the north shore of Lake Balkhash, 52 nm northeast of the center of the Sary-Shagan Support Base.

Construction details of this facility are presented in Table 1.

A support area just northeast of the building triad consists of two sections: the main section composed of approximately 19 buildings

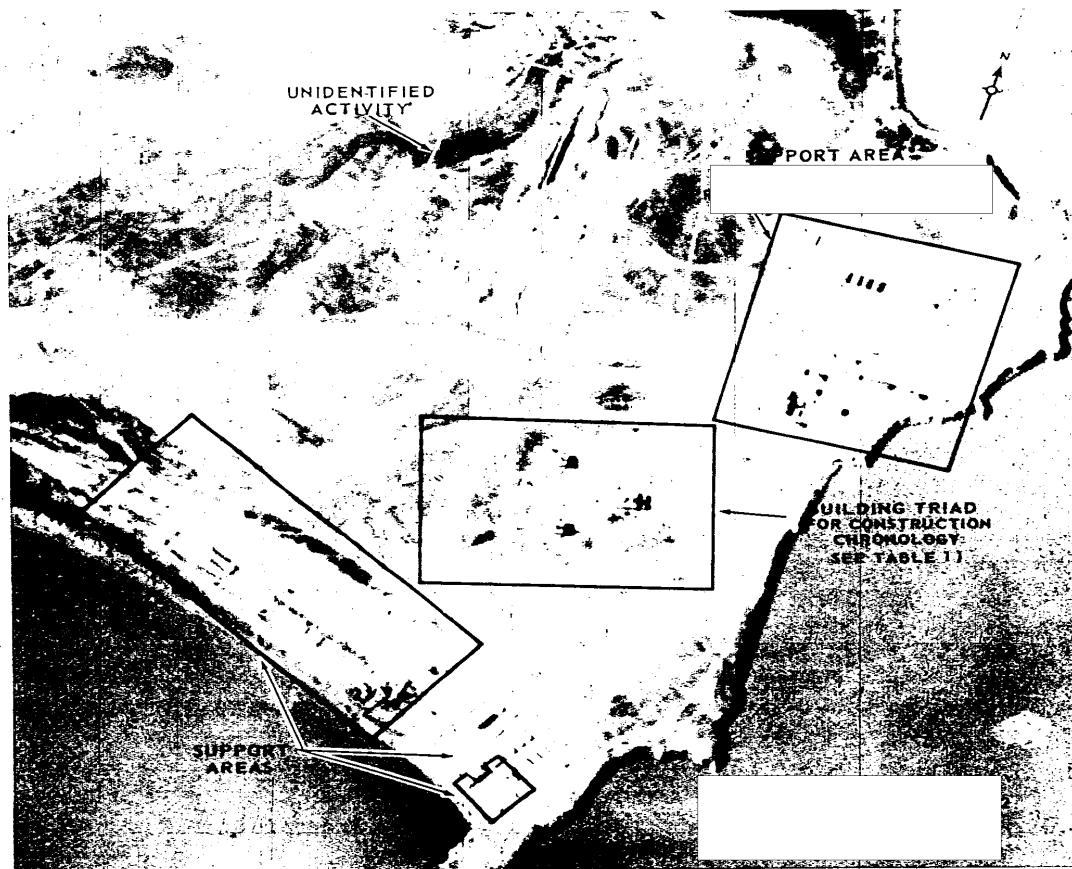


FIGURE 23. POSSIBLE INSTRUMENTATION SITE 13. [redacted]

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Mission and Date	Launch Complex B	Instrumentation Site 2	Instrumentation Site 10	Possible Instrumentation Site 13
	No activity	No activity; photography indistinct	Activity undetermined; haze	No apparent activity; heavy haze
	Earth scarring	Not covered	Not covered	Not covered
	Not covered	Outlines of 2 small bldgs visible; no evidence of large bldg	Not covered	Outlines of 3 bldgs barely discernible
	Three bldgs under construction	Two small bldgs appear complete with objects on roofs; large bldg under construction; 3 bldgs connected by ground scars	Two small bldgs probably under construction; large bldg under construction (only walls observed)	Two small bldgs appear to have objects on roofs; construction activity on roof of large bldg
	Two small bldgs appear complete with objects on roofs; roof construction on large bldg	Small bldgs appear complete with objects on roofs; large bldg under construction	One of 2 small bldgs appears complete with connecting ground scars; large bldg appears complete with unidentified object on rear of bldg; 3 bldgs gray in tone; scarring at site	Activity continues on roof of large bldg; small bldgs appear complete with objects on roof
	No apparent change in small bldgs; large bldg appears complete with objects on roof	No apparent change in small bldgs; large bldg under construction	Cloud covered	Not discernible
	No change in 3 bldgs; structure paralleling large bldg present; activity on the roof of large bldg and in general area; crane-like object just south of large bldg	No apparent change in small bldgs; large bldg appears complete with objects on roofs; structure paralleling large bldg present	One small bldg dark in tone; the other light in tone, both with an object on the roof; the roof of the large bldg is half light and half dark in tone with an object on the dark half; structure paralleling large bldg present; possible calibration point observed	No change in small bldgs; construction activity continues on roof of large bldg; structure paralleling large bldg present; possible calibration point noted
	No change in 3 bldgs; some activity on roof of large bldg; ground scar under construction from northern of 2 small bldgs in NE direction	No discernible change; hazy photography	Cloud covered	Not covered
	Cloud covered	Not covered	Not covered	Identification only

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Table 1. Continued

Mission and Date	Launch Complex B	Instrumentation Site 2	Instrumentation Site 10	Possible Instrumentation Site 13
25X1	No apparent change in 3 bldgs. except for construction activity on roof of large bldg	Two small bldgs light in tone with object on roof center; large bldg is light in tone with object on rear of roof	Cloud covered	No change in facilities except for the appearance of a square dark pattern on the roof
	Two small bldgs unchanged; a tall tower with circular dish-like or disc-like object on top now positioned at rear of large bldg; ground scar appears complete from northern square bldg to center of loop road within fenced area of Facility B	No change in previously mentioned facilities; 2 unidentified light-toned objects appear north of the triad	The object on the roof of the light-toned small bldg is not discernible; activity noted on the roof of the dark-toned small bldg; work continues on roof of large bldg where unidentified object remains	No significant change in facilities.

of varying sizes and a smaller section consisting of 4 parallel rectangular buildings. This support area was constructed between [] and [] and has remained virtually unchanged from that time to []. A second support area along the shore south of the building triad is composed of a total of 21 structures and is divided into two sections. The facilities in the western section were constructed sometime between [] and [] and consisted of a probable batching plant and warehouses. The majority of those in the eastern section, largely barracks and administrative buildings, were developed between [] and [] with four noted as early as []. One

was observed under construction in [] and was apparently complete the following month.

A small area of excavation situated just north-northwest of the building triad observed in [] remained without significant change until []. At that time relatively extensive excavation, scraping, and grading activities took place and have continued through [] producing a linear excavation approximately 2,200 feet long. Several very small structures and possible pieces of equipment are evident within the site as well as a large possible structure under development in the approximate center of the excavation.

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REFERENCES (Continued)

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ACIC. US Air Target Chart, Series 200, Sheet 0245-10AL, 2d ed, Jun 60, scale 1:200,000 (SECRET)

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ACIC. US Air Target Chart, Series 200, Sheet 0245-15AL, 2d ed, Mar 63, scale 1:200,000 (SECRET)

AMS. Series DESPA-1, Sheet NL 43-4, Edition 1, Jun 63 (TOP SECRET [REDACTED])

AMS. Series DESPA-1, Sheet NL 43-7, Edition 1, Jun 63 (TOP SECRET [REDACTED])

AMS. Series DESPA-1, Sheet NL 43-5, Edition 1, Nov 62 (TOP SECRET [REDACTED])

DOCUMENTS

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1. CIA. PIC JR-1010 61, Antimissile Complex, Sary Shagan, USSR, Apr 61 (SECRET [REDACTED])
[REDACTED] - Downgrading Prohibited)

25X1

2. CIA. PIC JR-3 61, Antimissile Test Complex, Sary Shagan, USSR, Changes [REDACTED] Apr 61 (TOP SECRET [REDACTED])

25X1

3. NPIC. R-21 62, Antimissile Test Center, Sary Shagan, USSR, Changes and Additions [REDACTED]
Feb 62 (TOP SECRET [REDACTED])

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4. NPIC. R-135 62, Antimissile Missile Activity in the USSR, Oct 62 (TOP SECRET [REDACTED])

25X1

5. NPIC. R-61 63, Antimissile Test Center, Sary Shagan, USSR, Changes and Additions [REDACTED] Apr 63
(TOP SECRET [REDACTED])

6. NPIC. R-147 63, Possible Antimissile Missile Associated Facilities, Moscow Area, USSR, Jul 63 (TOP SECRET [REDACTED])

7. NPIC. R-294 63, Hen Roost Antennas, Antimissile Test Center, Sary Shagan, USSR, Jul 63 (TOP SECRET [REDACTED])

8. NPIC. R-103 64, Possible Antimissile Missile Associated Facilities, Moscow Area, USSR, Feb 64 (TOP SECRET [REDACTED])

REQUIREMENTS

USAF. AF-4 63

CIA. OSI R-155 63

NPIC PROJECT

J-80 63 (partial answer)

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